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Color balanced image detector system.

An imaging system for producing multicolor images of a scanned subject includes a plurality of detector assemblies. Each of the detector assemblies is sensitive to a specific color. Typically, red, green, and blue detector assemblies are employed for converting images in the primary colors to the desired output image. Each detector assembly includes multiple rows of CCD detector elements positioned in registration with each other for a two-dimensional array of the detectors. Pixels of the subject are viewed repetitively by the successive

detectors of the column to provide for an integrated detector signal. The number of detector elements in each column is varied in accordance with the color sensed by each assembly to provide for greater integration of low-intensity portions of the spectrum. This compensates the output image for variations in filter attenuation, lamp illumination, and CCD sensitivity as a function of light wavelength. The mode of compensation preserves a high signal-to-noise ratio.

